

ABSTRACT OF THE DISCLOSURE

A method of making Cu, Zn, and/or Cu/Zn alloy nanoparticles subjects one or more targets to laser energy to form a vapor and condenses the vapor to form nanoparticles having an average particle size of less than 20 nm. The optional application of an electric field results in nanoparticles with aspect ratios greater than 1.0. The target(s) can be a single target or separate targets comprising a mixture of copper, zinc, and/or copper/zinc. When separate targets are used, the laser beam can be split to form two separate beams each of which is made incident upon one of the targets. The nanoparticles can be formed in a chamber having an inert atmosphere or a reactive atmosphere and a convection current is created in the chamber by maintaining the top plate at a lower temperature than the bottom plate.